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[For the American Bee Journal.]

Michigan Beekeepers' Convention.

In our last issue we noticed the organization of this Convention, and gave a list of the officers elected.

The next meeting is to be held at the time and place of the next Michigan State Fair.

The following is the official report, by the Secretary, of the discussions:

WHY DO BEES SWARM?

Mr. Otis thought the primary instinct of worker bees was to store honey, not to reproduce their kind. For want of honey cells, they would destroy eggs and young in brood cells, and form queen cells. The queen is characterized by implacable hatred to other queens, and as these are hatched, if the worker bees would not permit her to destroy them, she would form a colony and swarm. He thought queen cells were never built except when there was a full store of honey, or when the old queen was disabled from accident or age.

Messrs. Baldridge, Moon, and Portman thought that, as with all other animals, the prime instinct of bees was increase of kind. They had known swarming to take place in a hive not more than half full of honey, and containing a young fertile queen. They also thought that a season rich in honey plants induced more early and frequent swarming.

BEST METHOD OF WINTERING BEES.

All thought there should be a dry uniform temperature, from 32 to 45 degrees. Should be kept in the dark, free from disturbance, and whatever they were in should be mouse-tight.

Messrs. Taylor, Baldridge, Townley, Otis, Conklin, and the President, argued strongly for housing. If put in cellar, it should be dry and quiet. Clay cellars were never good. If houses were built, the ground should be hollow and filled in with saw dust. Some advocated a room within a room. The President said he kept a snow bank near, and, to keep the temperature sufficiently low, would throw in snow when necessary. To winter well, bees should be numerous enough, have plenty of food, and some empty cells in which to cluster, to keep warm. Care should be taken not to overheat, as the exercise would cause overfeeding, which would fill their intestines with fæces and cause disease. Bees should be taken out on warm days, to extrude their excrement. Should have empty comb for eggs in the spring. Cloths and cobs should be placed in the space for surplus honey boxes, to absorb moisture. Good ventilation was urged by all the speakers. All thought that keeping the bees thus warm, or in uniform temperature, would save fifty per cent. in honey. Some had known good sized stands, when housed, to be kept on four pounds of honey.

Rev. Mr. Portman, with Metcalf hive, had been more successful in keeping bees on summer stands, than his neighbors had been in housing. He questioned very much if housing paid for the extra expense and trouble. With many others, he had known bees when buried under straw and earth to winter well.

Mr. Moon had experimented much. He said on summer stands ice would sometimes prevent good ventilation. Pure air was the great desideratum. He thought out-door wintering most safe. Bad air was the most fruitful source of disease.

Mr. Kent said if bees were thoroughly ventilated they would eat as much when housed as they would on summer stands, and, if not well ventilated, disease would settle among them.

Mr. Cook thought the extra heat in housing, without great vigilance, would sow the seeds of disease, and that beginners would run less risk by wintering on summer stands.

BEST METHOD OF ARTIFICIAL SWARMING.

Mr. Moon looked with little favor on artificial swarming. He thought no stand should be divided more than twice in the season; generally once was better. He thought natural swarming the best. Never lost a swarm. He could control the time of swarming as follows: Raise queens artificially, and by putting one in a large full stand, swarming immediately took place.

Rev. Mr. Portman said he raised queens in nuclei, and placing them in a hive, took frames containing young brood and workers, which he placed with them. Thought this was the best method of artificial swarming.

Mr. Otis gave what he thought the best modes, as follows: 1st. Take one frame of brood comb filled with eggs from the large stands; put these with a queen in a new hive. The adult bees are left in the old stand. 2d. Put empty brood and honey combs into a new hive; drive all the bees into this; then introduce bees from two other large hives into the old hive. If near swarming time, the old hive will surely have queen cells. From ten good stands he could safely make eighty in a good season; though it required much experience to produce such a large increase with safety. He did not raise his queens in nuclei, but in a full hive. Queens would always lay, or preferred to lay, eggs in small cells. Thus he could control the kind of eggs, by controlling the kind of cells.

Mr. Moon caused large well-filled stands to swarm by introducing queens; and, by examining, he found there were no queen cells in the old hive.

Mr. Thomas, of Canada, thought that a great deal was gained by artificial swarming. He left the bees till near the swarming time. He then took the card on which was the queen, put it into a similar hive, and placed it where the old stand had stood, removing the old stand to some distance. If the queen is on a worker brood comb, he placed it in the centre; if on a drone comb, he placed it to one side of the new hive.

Mr. Baldridge wished all to examine this point of position, as he thought it was always better to place it on one side. He thought the method given by Mr. Otis the best, as all trouble in finding the queen was obviated.

Mr. Rood had practised Mr. Thomas' mode with excellent success.

Mr. Otis thought that to succeed with bees you must become conversant with their natural history and workings. Following others will never do.

Will Bees Work in Boxes Partially Filled the Previous Season.

The President, Dr. Conklin, Messrs. Moon and Otis, all said that they would.

What is the Best Method of Procuring Surplus Honey?

Messrs. Portman and Conklin used boxes, placing one above the other, so that both would be filled without disturbing. Thus time would be saved.

Mr. Baldridge said that by uncapping two or three frames the bees would carry all the honey from below upward. Thus a large amount of honey can be obtained in a short time. Mr. Otis confirmed that statement. These gentlemen favored extracting honey from the comb, preserving the comb to be again filled, as comb is an animal secretion, and it takes twenty pounds of honey to form one pound of comb. And if one pound of comb would hold twenty pounds of honey, still they thought the difference in price would not make up for the loss of comb.

Mr. Baldridge thought much more honey could be obtained by using frames, and advised all to try storing in the body of the hive, which he thought the best.

Mr. Otis said he thought so too; the only trouble is eggs will be laid in the boxes. He preferred small boxes. It saved waste from cutting the comb.

Mr. Moon liked rack boxes best. Sometimes he obtained three tiers in a season. Preferred to place the boxes on top, but very near the main hive. He thought, as a matter of taste and price, it was better to leave the honey in the comb.

Mr. Balch preferred rack boxes.

Quite a spirited debate took place as to the policy of pumping. Most of those present seemed to think it a doubtful practice.

How to Remedy Foulbrood.

The President said he had tried all the ways he had heard of, and recommended, as the best riddance, burying bees, hive and all, so deep that there could be no hope of resurrection. In foulbrood the comb is dark, cells very concave, and there is a small opening in the cells.

Mr. Baldridge would adopt total destruction.

Mr. Otis would bury in the fall. In the spring would put them in a clean hive, and shut them up till all the honey in them was digested. He thought they would recover.

Mr. Moon thought that transferring to new hives is a sure cure.

Best Plants for Bee-pasturage.

Mr. Thomas said Alsike clover was excellent for bees, as it was in bloom twice as long as white clover, and par-excellent for stock, as it yielded twice as much fodder in bulk as red clover, and was better feed. He has had eight bushels of seed to the acre. It is better on strong soil, but exceeds red clover anywhere. Lodges, as he has seen it five feet seven inches in length. Sows early, five pounds to the acre in Canada. Does not fruit much the first year, and only the first blossoms produce seed at any time.

Mr. Baldridge thinks it much better formed to resist frost than red clover, as the multiple of primary roots was carried much further. It is never thrown out by frost, or killed by water standing on the ground for three or four weeks in the spring. Melilot, a biennial, was better for bees, but otherwise worthless. He thought there was but one variety of Alsike.

Can Spare Queens be Wintered Over.

Rev. Dr. Portman said they can, by taking them with a few bees into a cellar and inverting the receptacle.

Best Method of Introducing a Queen.

Rev. Mr. Portman used to cage his queen; but now he covers her with honey, and thus succeeds admirably.

Mr. Conklin said when honey is scarce he would drive the bees into a cap, then daub the

queen with honey, and send the bees back. By the time they have taken the honey from her they would surely be friendly. If honey was plenty, he followed the plan recommended by Mr. Portman.

Mr. Baldridge said, to change queens, just kill the old one, then throw her in the midst of the bees, and in their grief they will gladly receive the introduced queen.

Mr. Balch said beginners had better use the cage, as recommended by Mr. Langstroth.

PROPER TIME TO INTRODUCE HONEY BOXES.

Rev. Mr. Portman said if the season is good and the stock strong, put on the honey boxes early. He would put two swarms together, if young, and place the boxes in two or three days; if sooner, the queen may lay eggs in the extra honey comb.

The President thought that honey boxes should be placed as soon as the bees drum on the hive.

CAN HONEY BE EXTRACTED FROM COMB THAT CONTAINS UNCAPPED LARVÆ WITHOUT THROWING OUT THE LARVÆ?

Mr. Otis thought this matter of little importance.

Mr. Moon thought differently. He did not wish an extracting machine if it destroyed the larvæ.

CAN QUEENS BE REARED AND FERTILIZED IN WINTER?

No person present could answer affirmatively.

WHY DO SOME QUEENS LAY ONLY DRONE EGGS?

Messrs. Otis and Cook showed that it had been fully demonstrated by scientists that this was owing to the eggs being unfertilized. This is one of the very few cases among animals, where unfertilized eggs would develop. Unfertilized queens would always lay drone eggs. Fertile queens could lay drone or worker eggs, by controlling the seminal sac.

IS THERE SUCH A THING AS A FERTILE WORKER?

Several gentlemen said they had seen workers laying eggs.

Messrs. Otis and Cook took ground that these were immature queens, nevertheless, which, so soon as there was a necessity, would deposite eggs. Mr. Cook showed analogous cases among other animals.

MOVABLE FRAMES AND BEE-HIVES.

Mr. Portman thought movable frames were very desirable. No one could afford to do without them.

Mr. Otis thought we should have that perfect control of the bees, which could only be gained by using movable frames.

A resolution was passed that all from other States in attendance at our meetings be considered honorary members.

A resolution was passed that we support the AMERICAN BEE JOURNAL, and request its publication semi-monthly.

The Secretary invited the members to visit the Agricultural College. Mr. Moon hoped that all would accept the invitation, as he had visited the institution and had never enjoyed a visit more in his life.

Mr. Baldridge presented an invitation to all the members to visit the North American Bee-keepers' Association at its next meeting.

[For the American Bee Journal.]

Answer to the Question, How Can I Winter My Bees Successfully?

Almost every number of the BEE JOURNAL at this season contains articles on wintering bees, and "legion" are the plans suggested. One would winter on the stands; another would winter in the house. One would bury; another would put in the cellar. One ventilates at the top; another at the bottom. One uses corncobs; another uses straw mats. One would cover the passage through the honey-board with wire cloth; another would not use the wire cloth at all. I fancy a novice would be led to suppose that it was extremely difficult to hit upon a proper plan; and that, at best, there was a great deal of trouble attending the wintering of bees. Now I would say to my fellow beekeepers that it is quite as easy to winter bees as to winter horses, and far less trouble. All this talk about corncobs, straw mats, wire cloth, and the various methods of ventilation, will do well enough for those who have time to attend to it. Practically, however, it is of no account. To winter bees successfully one must first understand what is the natural condition of bees during the winter; then winter them so as to secure that condition; and nothing further is required.

It may be asked—what is the natural condition of bees during winter? I answer, it is a semi-dormant state—a sleepy, stupid condition. The reason why such a state is the natural one, may be given as follows: First, it is a state or condition in which the least amount of food is required; hence the bodies are less distended under this condition, and the excrements are more easily retained. Secondly, a semi-dormant state is secured at a temperature calculated to carry off by evaporation the watery substances from their bodies, thus securing a more healthy condition of the stock. Thirdly, the temperature being always above the freezing point, the bees are able to reach any part of their hive at any time for food. Fourthly, bees wintered in a semi-dormant state always come out in the spring healthy and vigorous. This fact alone is sufficient to prove it to be a natural condition for winter. How then can it be secured? Says one, if I have a room in which I put fifty stocks, it is all right; but if I have only eight or ten in it, it is all wrong, for it is too cold. Says another, I find the same difficulty in constructing a place to winter bees; if I make it warm enough for half a dozen stocks, it is too warm for forty or fifty stocks. Allow me to say that

such wintering places are not the thing. A properly constructed wintering place for bees may be large enough to winter five hundred stocks in a semi-dormant state; yet a single stock would winter equally well in the same place. Such a place is nothing more nor less than an underground cellar of proper dimensions. Do you laugh? Laugh on, then. But if you construct such a cellar as I am about to describe, you may, next fall, as soon as the earth is mantled in snow, step out some morning and carry your bees into it; never mind your wire screens, corncobs, or Kidder-mats; never mind whether you have upward or downward ventilation, or ventilation at all; if sufficient air gets into the hive for breathing purposes, close up the entrances and hustle them in—close the door, lock it, and go about your business; and, if every stock has sufficient honey when put in, every stock will come out laughing in the spring. Then you will have something worth laughing at.

Now for the cellar. First, build large enough. You cannot spoil it by building it too large; but you can spoil it by building it too small. Second, wall it up with a hollow brick wall. Third, cover the bottom with water-lime as you would a cistern; it will become as hard as stone. Fourth, let it be a least eight or ten feet in depth.

In such a cellar, if large enough, you may winter five hundred or a thousand stocks; and if you have only one stock, it will winter these equally well. A cellar twenty feet by thirty is a good size, and will winter from one to two hundred stocks, without ventilating; and if ventilated, will winter five hundred stocks, and perhaps more. In such a cellar, a thermometer will range at from 35° to 40° F. above zero, when there are no bees in it. It will take a large number of bees, in a cellar of the above size, to materially affect the temperature. In such a cellar the bees are not affected by the changes of the weather; even a thermometer will not vary more than four or five degrees during the winter.

But, says one, I really think the hives should have upward ventilation. It is like the doctor's bread pills, it will do them no harm in such a cellar, if it does them no good. Very strong stocks in a very tight hive might be the better of upward ventilation; but stocks are rare indeed that require more ventilation than would be given by empty honey-boxes remaining in the hive right side up. If, however, you have time to attend to it and choose to ventilate, you can do so in any way that pleases you best; for in such a cellar you may remove the honey boxes, leaving the passages open, and the bees will hardly come out. Mr. Gallup is quite right in that. But if you choose to put on wire cloth to quiet your fears, and set the thing at rest, be it so; and do not be afraid that some hot blooded bee will gallup up to the wire, and finding himself fast, set up such a horrid yell as to arouse all his sleeping companions; for such will not prove to be the rule. And if Mr. Gallup will pass around and quietly lay his piece of wire-cloth over his bees, he will find what I say to be true—provided they are now in a semi-dormant state. But says another, I am not able to build such a cellar. That does not do away with the fact that bees can be wintered in such a cellar successfully, and with less trouble than we now winter our horses. Often a stable for two horses costs as much as would a cellar of the above dimensions. Then we require to feed and tend our horses, after having provided them with comfortable quarters, while the bees feed and tend themselves. Surely they are entitled to good quarters.

I shall lay out more money for feed for my poney this winter than his head is worth; and the profit derived will simply be the luxury of riding. Every ten stocks of Italians I winter will, in the spring, be worth more than the poney, and require no outlay for feed or tending; and the luxury in the form of surplus honey, taken from them last fall, is fully equal to the luxury of riding, and quite as profitable. Therefore I say—"keep bees! keep bees!" and provide good winter quarters for them. If unable to provide as good winter quarters as described, approach as near to it as possible.

J. H. THOMAS.

BROOKLIN, ONTARIO.

[For the American Bee Journal.]

Wintering Bees on Their Summer Stands.

To-day, February 13, 1869, my bees are making their first general issue, and although the thermometer only reached 47° at three o'clock this afternoon, yet the atmosphere is dry, soft, and mild; and, with one or two slight exceptions of a few minutes, the sun shone out brightly all day. Though the thermometer did, on several days during the winter, reach about the same figures, yet other causes, such as high or damp winds, prevented a general flight. But this morning the bees seemed bent on having a general frolic; and before the thermometer reached 36°, they began to sally out in great numbers. Those of them that were lucky enough to keep themselves in the sunshine were all right; but a few seconds out of it chilled them beyond the power of flight, and falling on the snow (which is about a foot deep on a level) they perished. In fact a few minutes in the shade, at any time during the day, was sufficient to chill many beyond the ability of flying, and a good many were thus lost.

The winter so far has been very favorable in this section for wintering bees on their summer stands. We had comparatively little wind, or cold or warm weather—the cold not continuing long enough at a time to prevent the bees from supplying themselves with honey (if it was in the hive), by either moving to it, or moving it to themselves. Neither was the warm weather sufficient to cause many bees to sally out and be lost. We have not had more than half a dozen zero nights this winter. On the morning of February 8 the mercury was 6° below, which was the coldest of the season by three degrees. Unless we yet have something worse than we have had, out-door wintering will be a

success here this winter. But still, if a man had his bees in good winter quarters, he would be saved a good many ague fits of fears about them, when for snaps of a week or fortnight the thermometer shows from 10° to 20° below zero, with a tornado to match—holding out a fair prospect of a score or two of empty hives

On looking through my yard to-day, I found my bees flying briskly at all the hives, but one. I am trying a new plan with my movable frame hives (eighty-three in number) this winter, by placing them in two rows, back to back, and filling them with shavings; then setting two rows again on top of the first, and filling in again; and then two rows more on top of those—making them three tiers high, and putting a temporary roof over the whole. I see they are all alive yet, though quite a number of them were rather weak, in consequence of being divided in September (in order to raise queens) and were not united again, as they should have been.

My non-movable comb hives (ninety-one in number) remain on their summer stands, and all but one appear to be in good condition. I think from their actions they are breeding considerably. They seem quite anxious for water, and are taking it as fast as it melts from a small pile of snow, about the size of a peck measure, on the south roof of the barn, but which is now about used up, and I have thrown up some more. The whole of the wet portion of the roof is black with bees, and they do not let a drop of the water escape, but work clear up to the snow. I find by an occasional young bee thrown out of the hive, that some of them are hatching.

The usual quantity of bees are being wintered in this region. The last season, though quite poor for honey, produced swarms enough to supply the previous winter's loss. I hear nothing of "that bee disease" in this section. *That* is a puzzler. It takes me entirely "off my pins." I see no explanation that seems adequate to solve the problem. The most rational conclusion of all the irrational conclusions, is the *irrational conclusion* that the scarcity of forage induced the bees to forage on some poisonous plant.

I intended to send this two days ago, but delayed doing so, thinking that I would to-day go in the country and see how my apiary there (six miles distant) has wintered. I have not seen it for several weeks; but the weather clouded up on Saturday, and yesterday morning was as chilly and disagreeable as Saturday had been pleasant. The wind was north, and the mercury stood at 22° to 24° all day. This morning it was raining, with the lower current of air northwest and the upper current southeast; and it has been about "which and t'other" all day, alternating between snow and rain. But the southeaster has rather got the better of it, and raised the thermometer to 38°. Between the two, however, they have cheated me out of my country visit, so that I will trouble you no more at present.

WM. M. STRATTON.

WEST TROY, N. Y., Feb. 15, 1869.

[For the American Bee Journal.]

Wintering Bees on Their Summer Stands.

MR. EDITOR:—Having to use my cellar to store a large crop of potatoes, I concluded to winter a part of my colonies on their summer stands. I moved them gradually in the fall, until I had them in a row running north and south, with about twelve inches space between the hives, which were set upon scantling, some four inches from the ground. On the approach of cold weather I drove in stakes three feet long in front and rear of the hives, and about eighteen inches from them, to which I nailed some old fencing plank—thus making a rough box, twenty feet long by four feet wide, three feet high in front and two in rear. The caps were removed, and the honey-board raised all round the thickness of a four-penny nail. All the holes in the honey boards were closed, so that the ventilation was at the sides, front, and rear, instead of at the top immediately over the bees.

After arranging a board over the entrance of the hives, to prevent the straw from falling down in front of them, the space in front and rear, and between the hives as well as over them, was packed with perfectly dry wheat straw; and over that a roof of boards, making all secure from rain and frost.

I examined the hives about the 10th of March and found them in fine condition. They had a good supply of sealed brood, and had not consumed more than half of their winter stores. The straw packing preserved an equal temperature; and it was only on a few warm days during the winter that the bees from these hives ventured out, and when they did so the air was so warm that none of them became so chilled that they could not regain their hives.

The greatest objection to this plan is, that the hives must be set close together (to save the expense of a large shelter), and the bees do not readily locate the position of their respective hives, the entrance to all being just alike. And as they do locate themselves before the weather is permanently warm enough to remove the shelter, the hives must be gradually removed to where they stood in the fall, as I do not like to have them less than three feet apart. This might be more easily done, by arranging the hives in two rows, removing every alternate hive to the front or the rear, the distance required between the rows, as bees readily accommodate themselves to a change of position in the line of their flight.

I have wintered in the cellar a few stocks, which I bought about the first of January. They are in common box hives, and were set immediately on the south floor of the cellar, with an opening in the top, one inch by seven. They have wintered in a fine condition, and have been set out only about two weeks.

By the way, these hives were moved twenty miles in a common two horse wagon without springs of any kind, and over a rough, frozen road. They were simply turned bottom up, and

a coarse cloth tacked over the open end of each hive. The jarring and jolting caused the bees to fill themselves with honey, and I suppose to feed the queen, for they commenced breeding at once, as upon examining the hives about three weeks afterwards, I discovered young bees just emerging from their cells.

I do not like Mr. Quinby's plan of wintering bees in box hives, by turning them bottom upward; as I think bees should always cluster below their stores—which they cannot do in that position. The necessary ventilation is easily given, by a few holes in the top of the hive; through one or more of which, also, the bees if short of stores, are easily fed by inverting a bottle of syrup or honey over one or more of them.

Although this communication is much longer than I intended it should be when I commenced writing, I cannot refrain from saying a few words in regard to

VENTILATION,

which is one of the most important things in bee-culture, especially in wintering bees. A strong colony cannot be wintered in a room or cellar, the temperature of which is above the freezing point, without upward ventilation; and if in a close, well-made, painted hive, it will require the honey-board to be removed altogether —Mr. Miner to the contrary notwithstanding. He would have us believe that it is upward ventilation and eating cold honey that causes dysentery. I do not believe one word of it. Confine bees to a close hive, where they have no upward ventilation, and their warmth creates restlessness, they roam over the combs, eating enormous quantities of honey, become distended by accumulated fæces, and die by scores.

Mr. M. says look at the bees in nature's hive, the hollow tree, where they do well without upward ventilation. As if the hollow tree, with its porous lining of rotten wood, was not a very different thing from a close painted hive, which does not absorb dampness like the rotten wood. The hollow trees in Mr. Miner's country must be different from those here, if they have the cavity always closed at the top, and the entrance for bees always at the bottom of the hollow. Is it not as often at the top?

Now, Mr. Editor, this following after nature for patterns for bee-hives, or anything else, is all stuff. Where else, in the name of common sense, would bees in a state of nature go but to a hollow of a tree, stump, rock, or something of that sort, whether it be suitable or not? Nature gives us crab apples, choke pears, fox grapes, &c., to the end of the chapter; and it is man's province and duty to improve these things—which he has done by hybridizing, &c. The strong man, Samson, once found a colony of bees, with plenty of honey, in the carcass of a dead lion, where they were apparently doing well. They doubtless had ventilation enough, and would probably have done as well, or better, in the carcass of a dead jackass, it being smaller and more compact. But it does not follow from this that we should all turn out and kill lions or jackasses, to get their carcasses for bee-hives and their skulls for surplus honey receptacles. I hope Mr. Miner will not carry out his plan of copying after nature to such an extent as to advise anything of that sort; for while we have not many lions in this part of the country, we have a description or variety of the latter-named animal, having but two legs however, and should be sorry to see their carcasses filled with anything as sweet as honey.

With best wishes for the success of the BEE JOURNAL, I am truly yours,

J. R. GARDNER.

FANCY FARM, NEAR
CHRISTIANSBURG, VA., April 12, 1869.

[For the American Bee Journal.]

Feeding Rye Meal Broadcast.

MR. EDITOR:—I saw a notice in the April number of the BEE JOURNAL, that the Bee-keepers were going to hold a Convention in Jackson (Mich.), I accordingly packed a few greenbacks in my wallet, and started for the scene of operations; where we had a very pleasant time, and everything passed off harmoniously. I suppose you have the proceedings of the Convention; and I shall therefore leave you to judge of the merits of the discussions on the various topics. After we got through with the business of the Convention, finding we were only twelve miles from Mr. J. H. Townley's, Mr. O. E. Wolcott, of Byron, a very extensive and experienced beekeeper, and myself, concluded to take a drive out there and see if there was anything more to be learned about bees. When we arrived there, we found his apiary to consist of about fifty stocks of very fine Italians. The morning air was rather chilly, but it bid fair to be a pleasant day. Mr. Townley informed us, if it came off warm enough for bees to fly, he intended to feed them some rye meal which he had prepared for them. Accordingly, about 11 o'clock, the bees began to fly, and the order was to prepare the meal. We arranged a small platform on the ground, laid on a few pieces of empty comb, then scattered on some meal, and Mr. Townley took some of it and dusted the workers at the entrance of all the hives, to let them know that all things were ready. It was not long before the bees concluded to hold a convention on the rye-meal *platform*; and it soon became evident that the platform was too small to accommodate all parties. Mr. Townley then commenced scattering meal on the grass. At first it looked as though there would be a great deal of waste attending that mode of feeding. But the bees very soon commenced leaving the platform and confined their labors entirely to the meal on the grass. As the bees became crowded, he gave them more space, until he had covered about twelve feet square; and in all my experience I never saw bees work more diligently on anything. Mr. Townley carried out and gave them by actual weight 22 pounds, and by four o'clock, when they quit work, I do not think there

could have been over 4 pounds left, bran and all. The question is often asked, "can a country be overstocked with bees?" We concluded that was no longer the question. The question now is, "how much *rye* and *alsike* clover will the country produce?" There is another grave question for many to consider—"If the bees continue to manufacture such enormous quantities of rye for their own use, will not that stimulant known as *old rye* gradually increase in value, in spite of all the exertions of the *Ring* to induce Congress to reduce the tax?" Whatever others may think of rye, I am willing my bees should have my share, as I think very little of it for bread, and still less as a beverage. Now the thing we learned is this, the bees will work on meal more readily on the grass than on the table, as every bee left the platform as long as there was any meal to be gathered on the grass, and then reluctantly went to the platform.

JOHN T. ROSE.

PETERSBURG, MICH.

[For the American Bee Journal.]

Artificial Pollen.

In certain localities bees cannot find natural pollen as early in spring as they require it. Hence breeding is retarded, unless artificial pollen is given them. My method of giving it is as follows: It may not be the best, but I know it to work well. Take a shallow dish, or any number required—boxes two or three inches deep and twelve inches square are just the thing. Put in, to the depth of an inch over the whole bottom, Indian meal, oat meal, rye or buckwheat flour; then put in the centre of the meal a small piece of honey in the comb; set the dishes near or among the stock of bees, and if they have not got a supply of pollen and are unable to gather any natural pollen, they will accept the artificial without even "thank you." But if they have a supply, or can gather natural pollen, you cannot induce them to take the artificial; at least I cannot. I have seen a single stock in my apiary carry in a pint of meal in a few hours, and not another stock in the apiary, though there were some thirty or forty, would touch it. The cause of this was that all the combs in this stock containing bee-bread had been exchanged with another stock for comb that contained none. It did one good to see the yellow jackets work at that meal. The dishes should be covered or taken in when it storms.

J. H. THOMAS.

BROOKLIN, ONTARIO.

The *propolis* collected by the bees is of a resinous nature, has a balsamic odor, and is of reddish brown or dark color. It is supposed to be collected from fir or pine trees, or from the envelopes of the buds of many trees and plants, or their resinous exudations. It is exceedingly clammy when first gathered, but dries so rapidly that the bees which carry it home have, at times, much difficulty in dislodging it from their legs.

[For the American Bee Journal.

Pollen.

MR. EDITOR:—My bees are entirely destitute of pollen this winter. On a careful examination of different hives, not a cell can be found with any pollen in it. Nor was a single cell to be seen occupied with brood, up to the 20th of March, even in large colonies occupying eight frames in a hive. A little rye flour, left on the top of the frames a day or two since, appears to attract no attention. Perhaps it needs mixing with pollen in order to sustain young bees. Consequently no young brood need be expected till they can be removed from the cellar, which last year was on the 20th of April.

Perhaps those who have been familiar with movable comb hives for years, can give us some light as to whether the scarcity of pollen is confined to this year, or to this locality. Last year, in May, some of the central combs appeared so overloaded with pollen, as to make the brood quite scattering. In June, as the brood increased, the trouble vanished. By the 1st of August the hives were crammed with basswood honey, and gathered with little or no pollen. A long cold spell ensued till on September 21, frost closed up the bee accounts for the season.

My colonies, one hundred and ten days in the cellar, used 105 ounces of honey, each, and had eighteen pounds, each, left on the 6th of March.

H. D. MINER.

WASHINGTON HARBOR, (WIS.) March 22, '69.

[For the American Bee Journal]

How to Save Your Bees.

MR. EDITOR:—Mrs. E. S. Tupper says, 1: Never divide any stock until it is strong, both in numbers and brood. Until this is the case, the bees are better in one hive than two. 2. If a colony become strong *early*, leave it undisturbed, and get all the honey you can from it. 3. Never cripple the strength of a colony containing a fertile queen; as soon as you do this, her laying diminishes.

Here the idea is, have your colonies strong, and keep them so. This appears to be a fundamental rule in bee culture. But, if weak, what is the result? Why, their destruction. Well, cannot a few bees gather as much honey, in proportion, as the many? Of course they may. But this is not all. Heat also is required, to hatch, mature, and develope all the brood, prepare the combs, and evaporate the water from the honey. So few bees cannot generate the animal heat required.

Well, how can a colony be crippled? It can be done three ways at least. Kretchmer, in his Beekeeper's Guide Book, says—"The breeding is to a large extent dependent, 1st, on the strength of the colony; 2d, on the amount of food, (honey, bee-bread, and water); and 3d, on the season of the year." You can cripple your stock, then, by making it too weak for breeding

purposes. To remedy this, add combs of brood ready to hatch. You can cripple your colony by depriving it of honey, pollen, and water; thus causing *the queen to cease laying*. The remedy is, to supply these in an artificial manner, when the natural production fails. Again, it may be crippled by an unpropitious season, as that of 1868. The honey and pollen may, in great measure, be cut off for months; as from the middle of July last until the close of the honey season. If *two months* constitute the *length* of the *worker's life*, during this season of the year, then all can see that if brood raising is cut off, in great measure for two months and a half, in the after part of the season, destruction certainly awaits them as the chilly days and nights approach; although they may have honey enough in store to winter them, if there were bees enough to generate the requisite amount of animal heat to keep them from chilling to death. When this last remnant of the stock is *dead*, how many do you find? One or two pints is all that can usually be found in or about the hive. Pretty conclusive evidence this, that these are the remains of a stock that has been *crippled* either *wantonly* or through *neglect*, or, it may be, from *ignorance*. Well, I ask again, what is the remedy? Harbinson, Gallup, and all the noted beekeepers answer, *feed during this scarcity* of honey and pollen *to keep the queen breeding*, so that the stock is replenished by living bees faster than they *die*. Whilst in quest of the nectar and pollen, or doubling stocks until there are bees enough, will you apply the remedies in future, and save your bees from a similar fate of 1868?

JEWELL DAVIS.

CHARLESTON, ILLS.

[For the American Bee Journal]

Results of Wintering.

MR. EDITOR.—Last fall I sent you a description of a house in which I winter my bees. It appeared in the BEE JOURNAL for October, 1868. Mr. Gallup thought it would have been better if the sides were 10 or 12 instead of 6 inches thick. I will not contradict him in his theory. He is generally pretty much correct in what he says. I was glad to see him settle the Professor's business. I can sympathise a little with the Professor—to the amount of fifteen dollars and fifty cents, which I sent to him two years ago, but which he says he never received. I received from him in return, last summer, three Italian (?) queens, with one stripe just behind their wings; it was between a red and a yellow color. I thought they might be some of those dark colored queens, which good authority says are sometimes found among the pure breed. But, behold, their offspring was one half black and the other half one-striped. They never were worth the Express charges.

But, to come to the result of wintering my bees in the house above alluded to. About the middle of November I carried into the house 132 colonies of bees, and arranged them in four rows; two in the centre and one on each side, on shelves four deep; which left about two feet of a gangway between each two rows—which aided very well to examine them during the winter.

My hives weighed from 45 to 75 lbs. each. The empty hives, with comb and frames, will weigh from 32 to 36 lbs each. This will leave from 12 to 35 lbs. of honey in each hive carried in. The temperature in the coldest weather this winter was never below 40° F., and when it rose to 45° the bees appeared restless; which I could soon remedy by opening the ventilating tubes. I took them out the last week in March, weighed and examined them. They were all healthy; no mould on the combs, and very few dead bees on the bottom board. They weighed from six to eight pounds less, each, than when they were put in. Those nearest the ground had lost most weight, and those on the top the least; but none consumed more than nine pounds of honey.

One of my neighbors wintered his bees in a house similar to mine, but lost one half of his bees, and they consumed double the amount of honey compared with mine. But while my house was full, his was not half full of bees. Besides, he built his house late last fall. I built mine two years ago. The sawdust should be quite dry; or the house should be built in summer, so that it could dry thoroughly before bees are put in. My house was warmer this winter than last winter, which proves the above theory. I believe bees winter better outside, than if put into a cold room. They will consume not any more honey, besides getting the benefit of a warm sunny day, which we have occasionally during winter. My bees are now flying briskly. They have carried in about 200 lbs. of rye flour, and about five gallons of syrup. They like maple syrup best (and so do I,). To-day I noticed them bringing in pollen. I do not know where they get it; but they now refuse the flour.

Enclosed find two dollars for the JOURNAL, wishing it all the success it deserves. I could not do without it. I would say to every man that has a few colonies of bees, *subscribe for the* BEE JOURNAL. Get some hive with the movable comb, no difference whose patent—only this, if you winter out doors they ought to be high; but if you winter them as you ought to in this climate, in some dark, warm, dry place, the "shallow things" have many advantages over the others. Also, get some reliable book on the nature and habits of the honey bee. The Beekeepers' Guide Book, by E. Kretchmer, of Red Oak Junction, Iowa, contains much practical information, and so do many others. Improve the breed of bees, likewise by sending to some reliable man for Italian queens, but be careful of Professors. Attend to your bees as you would to anything else that you intend to derive benefit from, and you will have *luck*.

P. LATTNER.

LATTNER'S, DUBUQUE CO., IOWA,
April 12, 1869.

Where bees are, flowers must abound.

[For the American Bee Journal.]

Hunting Queens for Removal.

The usual method of finding queens in box hives is, to invert the hive, set an empty one on it, close the entrances, and drive the bees into the upper hive, by drumming on the lower one. The swarm is then looked over to find the queen.

In a different way, the operation may be very much facilitated, especially by the inexperienced "queen huntor." Leave the hive right side up; put on all the boxes; blow some smoke into the entrance, and close it. Now, drum on the hive, and drive what you can of the bees into the boxes. The queen will be almost certain to be among them. Then scatter the boxes, setting them three or four rods apart, and the same distance from the hive. In a few minutes the bees will desert the queenless boxes, while in the one containing her they will remain quiet, and there will be but few bees to look over to find her.

Even in movable comb hives, I prefer finding a black queen, by driving her into an empty box; instead of taking out the frames and looking over the combs. It is less trouble, especially if the swarm is a large one; and generally saves time.

J. H. Townley.

Tompkins, Mich.

[For the American Bee Journal.]

Wintering Bees in Paper Hives,

Mr. Editor:—As there is so much said about hives, we thought a few hints in regard to the subject, and that of wintering, might be of interest to that class of beekeepers who have been unsuccessful in wintering their bees in board hives in our cold climate.

In September last we transferred in Dr. Edwin Cox's Paper Hives several colonies, which we wintered with perfect success; while colonies in double wall board hives are in a sad condition. Those wintered in cellars are in a better state; but yet have not done as well by twenty-five per cent., as those in the paper hives have out of doors.

We weighed wood and paper hives last fall, and next month will give the amount of stores consumed. We wish friend McMullin, as well as other practical beekeepers, would give us a call. We will show them a better hive than the one described under the head of "Successful Bee-culture," in the March number of the Bee Journal, or we will pay all expenses which they incur in visiting us. Our hives are composed of eight walls, six of paper and two of thin boards, with an air space between each wall. They are tight and durable, and at the same time meet the wants of the bees in every respect. We do not use frames, but movable top-bars of a peculiar shape, which give us better combs than any other style in use. When combs are to be removed, we sever the edges by means of a thin sharp lance—a tool which every beekeeper should possess. Our honey box holds fifty pounds, and is so arranged that one box can be set above another, up to any number required. Our brood chamber is 13¼ inches square and 12 inches high, with nine combs.

A hive must be of such material and construction as to protect the bees from dampness and extremes of heat and cold, and offer them every advantage for storing surplus honey in acceptable shape for market, and give the apiarian full control in the general management of them.

The man who keeps bees from year to year, as the majority do in this region, without taking any surplus honey, is like a farmer who would keep a lot of fine milch cows and never milk them.

Chas. Hastings.

Dowagiac, Mich.

[For the American Bee Journal.]

Artificial Swarming, Queen-Raising, &c.

Mr. Editor:—As the season is approaching for raising queens and making artificial swarms, I will, with your permission, describe my most successful method of proceeding in either case.

After various experiments, I would say, in the beginning, that it is not for the knowing ones that I write this; but, as Mr. Gallup says, for those who know less than I do. If others, knowing doubtless methods as good or far better, should, on reading this, be induced to describe their modes of operating, I, for one, should be happy to hear from them, as my experience in beekeeping extends back only four years. By the way, Mr. Editor, I will relate what first led me to go into the bee-business. In the autumn of 1864, I was sojourning in the city of Dayton, Ohio. What caused me to dream of bees I know not, but certain it is I dreamed of bees more than thirty times during my stay of three months. This made such an impression on my mind that, on going home, I went to the bookstore and asked the proprietor if he had any books on bees, and was handed Mr. Langstroth's work on the hive and honey bee. To it, and our Bee Journal, I am indebted for nearly all I know about bees.

But to resume, from the 10th to the 15th of May, earlier or later, according to the season, I start my queen cells, by depriving some of my strongest colonies of their queens, taking out one or two frames with the queen and all the bees adhering. I put these into an empty hive, placing the frames at one side, and inserting a division board. I then set this hive one or two feet to the right or left of the parent stock, now queenless. Should too many of the bees leave and go back to the old hive, move this a foot or so to one side, and the other, containing the queen, as much nearer the old location. This will secure bees enough to care for the queen during her temporary absence. I have got as many as thirty-two perfect queen cells from a strong stock treated in this manner.

I much prefer this method of securing queen cells, to rearing them in small nucleus colonies,

as recommended by many. On an average the queens are larger and brighter-colored, and I think more prolific than those reared in nuclei. I suppose my friends, Mr. Smith and **, have found out ere this why I am opposed to closed top frames, in the practical management of an apiary, from personal experience.

On the ninth day I take out the frames, and for every queen cell that can be removed without destroying it, I form a nucleus. When procuring bees for these nuclei, it is best to do it in the fore part of the day, as then the great majority of the old bees are out at work, and the young bees remaining at home, having never flown out, will adhere to the nucleus wherever it is placed. On the tenth day cut out the cells, and insert one in one of the combs of each of your nucleus colonies; and in from four to six days each nucleus will contain a young queen. But before these queens are ready to fly, paint the entrances of your nucleus hives of different colors, or give them some obvious, distinguishing mark, or have them front different ways, so as to make them different from each other, and from neighboring hives, so that the young queens, returning from their excursions, shall make no mistake, but be sure each to enter its own proper hive.

Should any of the nuclei fail to rear a queen the first trial, give it another queen cell if you have any on hand; if not, break it up at once; or, by adding more bees and supplying them with worker eggs and larvæ, set them to raising queen cells—though I much prefer to have these raised in large colonies.

The old queen should be returned to the parent hive as soon as the queen cells are removed; and if the stock is reduced in numbers, exchange combs with some other strong colony, thus strengthening them up at once.

By the 12th or 14th of June, if the weather has meantime been favorable, the nuclei will nearly all contain fertile queens.

About the time the white clover comes into blossom, which in this part of the country is from the 12th to the 16th of June, I swarm or divide my bees. The process as I manage it is very simple; at least I think so. My hives are all made with ten frames each. I set an empty hive at the side of the one I wish to swarm or divide. After smoking the bees to quiet them, I remove few of the frames with the bees adhering to them, and place them in the empty hive. Ascertain which hive contains the old queen and mark it, so as to make no mistake in introducing a queen. Set each hive from one to two feet to the right and left of the spot where the old hive stood, and fill up each hive with empty frames, alternating one empty one between two full ones. Next day I introduce the young queen to the queenless hive, confining her in a cage from twenty-four to thirty hours, at the end of which time she is usually well received. Should one of the hives thus placed lose too many bees, move the most populous one further from the old stand, and move the other as much nearer to it.

To make these operations successful, all the colonies should be strong in numbers before division is attempted. The hives should be as near alike as possible in shape, appearance, and color, that the deception may be more complete.

My swarms made in this way last summer had filled their hives with combs, and were at work in the honey boxes before my neighbor's bees were prepared to swarm. While my bees gathered an abundance for winter, and a nice surplus besides, my neighbors got no surplus, and nearly one half of their last year's swarms starved in the past winter. My bees are Italians, procured of course from Mr. Langstroth's late importations. Those who contemplate Italianizing their apiaries this summer cannot do better than to send to Mr. L. His guarantee of purity can be depended upon.

HENRY S. SEE.

EVANSBURG, PA.

[For the American Bee Journal.]

Hatching Queens.

Mr. W. W. Cary, in the April number of the BEE JOURNAL, seems to think that Gallup is somewhat mistaken about queens hatching in seven or eight days. But I can assure him there was no possibility of a mistake. I had only four swarms and one nucleus that I had wintered over. Early in April I removed the queen from the nucleus, and all of the brood and eggs, and substituted a frame containing unsealed larvæ, &c., from my Italian swarm. The combs in all of my swarms or stocks were built the season previous, consequently all was new comb, and there was no queen cell of any description on the comb. I set the dates on the hive with a pencil. The comb was transferred at noon, and on the eighth day, about sunrise, the queen had hatched out and destroyed the remaining six cells. On the ninth day, at one o'clock, she came out and was fertilized; on the eleventh day, from the time the comb was given to the nucleus, the young queen had commenced laying; and in three months from the time she commenced laying she died of old age.

My neighbor, Mr. G. A. Wright, brought three boxes containing combs and bees here to raise queens; and I gave each nucleus a small piece of comb of about one inch by two, containing unsealed larvæ and eggs. On the eighth and ninth days after this, the first queen had hatched, and destroyed the surplus cells in each box. Mr. Wright came to separate the cells on the ninth day, and found he was one or two days too late. He was governed by the books, which say that ten days is early enough. Furthermore the books say that larvæ over three days old cannot be changed to a queen But what does the BEE JOURNAL say? See vol. 2, page 38, in a foot note, and you will find these words: "It is now ascertained that larvæ five and even six days old may be successfully employed for this purpose, and occasionally are so used by the workers." Now, allow three days in the egg and six days in the larvæ makes nine days, and seven days more in the pupæ state makes the full sixteen days. Forced queens with me have very often come out in eight or

nine days; but the instances above given are sufficient to show that there are such cases.

A queen dying by accident and a queen dying from old age are two different things altogether. The three queens I obtained from Mr. Cary were put in hives by themselves, and one of them was set on the back side of the house. That one I never showed to visitors, and did not open the hive at all till I discovered that there was something wrong, and then only occasionally. The other two I used to show visitors, and they are alive yet. The one that died commenced failing in the same manner that an old queen does, and for two weeks towards the last part of her eggs produced drones in worker cells. Now, if a queen fails in that way, I call it *old age*, whether at the age of three months or three years. When I lose a queen by accident I am very apt to know it.

E. GALLUP.

OSAGE, IOWA.

[For the American Bee Journal.]

Removing Bees.

QUERIST, on page 186, April number of the BEE JOURNAL, inquires what course I would pursue in certain cases, to cause bees to remain where placed.

When bees are drummed out of a hive with their queen, and allowed to cluster in a box, either with their own queen or a strange queen in a cage, for forty or fifty minutes, and then deprived of the queen and allowed to discover their loss, they can be put anywhere, either with a strange queen or a queen cell, or with eggs and larvæ from which to rear a queen—*provided* this be done at about swarming time, when the bees are gathering honey abundantly and hatching brood.

A novice in the business may fail a great many times. But "don't give up the ship." I can and do succeed every time; but I used to make a great many failures when I began. I learned the process from Mr. Wellhuysen.

Mr. F. H. Miner has knocked us upward ventilation men all flat on our backs. But, Mr. Editor, just tell him from me that Gallup will be after him in due time, with a nut for him to crack. That knock-down argument is not conclusive in my opinion.

E. GALLUP.

OSAGE, IOWA.

All the divisions of natural science have a mutual and convertible bearing, and closely interlink in their relations. Thus insects denote botany, which further indicates the climate or elevation and soil; and the superficial soil will point geological conclusions to subsoil and substructure.

One great natural science well mastered gives the key to the great storehouse of nature's riches, and yields a harvest of many different crops.

[For the American Bee Journal.]

Experience of a Beginner

MR. EDITOR:—Permit me, in the beginning of this my first epistle, to express my high appreciation of the AMERICAN BEE JOURNAL. In proof of which I may say that my first duty upon receiving a copy of it is to read it through from beginning to end. In it I find many assertions fully confirmed by my experience; many others which I take as valuable suggestions; and, lastly, some which appear to me to be opposed to both reason and experience. I will relate to you in few words, my experience and practice in beekeeping; and from it you will be able to gather the main points of agreement or difference between my opinions and those of your other correspondents.

In the year 1864 I imported the first hive of bees that had ever been in Cape Breton, and as the person from whom I ordered it represented it to be in a Langstroth hive, I obtained beforehand and studied that gentleman's invaluable work on the "Hive and Honey Bee." I also made a hive in accordance with Langstroth's directions No. 2, with observing glass and box cover. When my imported hive arrived I looked in vain for any resemblance between it and the one that I had made. It was a little broader, a little deeper, and a little shorter; and as to workmanship, could have been made in as many hours as I took days. Then, eight of the frames had slipped together at one end when the bees were put in, and the honey-board had evidently never been off since. It was a hard looking case; but, nevertheless, I took from it the next season a strong swarm and about seventy pounds of honey.

Encouraged by my success, I sent away in the fall of 1865, and imported seventy-five more hives, expecting of course to make as much from each one as I had from the first. They were recommended to me as being good stocks, some in box and some in Langstroth hives; and, on the strength of that recommendation, I took them without personal inspection. Soon after their arrival I found that the sellers had acted upon the saying—"I was a stranger (to the business) and they took me in!" In some of the hives the bees, combs, and honey weighed less than ten pounds. In the spring these of course were "non est;" but still I had about forty-seven hives left, and fondly imagined that my troubles were pretty well over—little dreaming that they had only just commenced. More than half the hives were frame hives, but *movable* frames they were not, nor ever were intended to be. Many of them had the frames firmly nailed in, and in others the combs were built directly across. More than this: the frames of no one hive would fit any other, even if they could have been got out. The maker of both them and the box hives must have thought that *variety* is the chief charm of life. I decided immediately that that style of business would never suit me. My comb frames must be *movable* and *uniform*. With that object I made forty-seven

new hives; and I think even Mr. Langstroth, if he could see them, would admit that he never saw Langstroth hives better made. These I filled with new swarms—most of them natural swarms. And now it began to dawn on me that my bees were badly diseased with foulbrood; and, what was worse, I had taken no precautions against the spread of the disease, but had allowed them all access to the diseased honey, never suspecting the mischief that was being done. I sold sixteen and had seventy-seven on hand in the fall; but they were so short of honey that I was forced to reduce their number to forty-five. Next spring, 1867, I transferred to my new hives all that still remained in the old ones, and broke up the old hives for firewood. That season I lost so many from foulbrood that in the fall I had only thirty-four on hand, including new swarms. Last spring (1868) I abandoned natural swarming. I lost four by foulbrood, but made eleven artificial swarms, and have now forty-one on hand.

If you think this worth publishing, you will hear again from

THOMAS C. HILL.

CAPE BRETON, N. S.

[From the London "Journal of Horticulture."]

The Baroness Von Berlepsch,

August Baron von Berlepsch, one of the most distinguished among the scientific beekeepers of Germany, married somewhat more than three years ago, Lina geb von Welebil. This lady appears quite as enthusiastic as her husband with regard to bees, and is, moreover, exceedingly clever, being, I believe, mistress of several modern languages. Having recently corresponded with her, I can speak positively with regard to English, which she writes and speaks with remarkable fluency and precision. It may be remembered that the Baron was prevented attending the great meeting of German bee-masters held at Darmstadt in September last, owing to his having been prostrated by a stroke of paralysis. The following article from the pen of the Baroness has recently appeared, and gives so interesting a glimpse of her married life under these adverse circumstances, that I am induced to submit a translation of part of it to the readers of "our Journal."

T. W. WOODBURY,
"A Devonshire Beekeeper."
MOUNT RADFORD, EXETER, ENGLAND.

BEHIND THE SCENES.

The delightful days of Darmstadt are over, and, although it was not permitted us to be present, they are still endeared to us by many agreeable reminiscences. Behind the scenes, as it were, we might yet take part in the proceedings, and delight in the considerate attention which was so kindly shown us.

Our first visitor was the Marquis Balsamo Crivelli, who went direct from Coburg to Darmstadt. In him we made the acquaintance of an enthusiastic bee-friend, and an amiable and honorable man. I count his brief visit as one of the flowers among the garland of joys which arose to us out of the meeting at Darmstadt.

As the sun of the 8th of September rose beaming in the heavens my heart indeed felt heavy, and it drew me powerfully towards the South. Hour by hour we followed in imagination the movements and proceedings of the assembly, and hailed with joyful emotion the arrival of the telegram which conveyed to us its greeting and kindly sympathy. It may be permitted to me to return to all and every one our heartfelt thanks for the honorable distinction which was thus conferred upon us.

Time passed on, and the meeting at Darmstadt over, Counsellor Kalb and his wife were the first who came to us, and, well pleased and happy, related all the pleasures which they had experienced. These were old friends, and we chatted and chatted until my dear husband became quite happy, when we prepared for an excursion to the Callenberg, so that he might rest after all the friendly excitement. How these bright hours shine in the camera obscura of the memory! Merry gossip, alternated with more serious conversation, soon brought us to the charming castle and favorite residence of our Duchess, where a stroll through the rooms was succeeded by a glance at the private apartment of the great lady, which I can never recall but with deep emotion. There, on a table placed in front of the oriel window which commands such a magnificent view, lay a simple wreath of immortelles, which touched a chord within me, whilst unutterable sensations rushed keenly through my heart, like the wailings of an Æolian harp.

Descending from the castle we visited Curzins, the game-keeper and bee-master, who kindly exhibited his little menagerie, but pleased me best by calling together the deer, which ran at large in the park, in order to feed them with apples. By this time evening had set in—a fragrant and misty autumnal evening. On one side lay the Castle of Callenberg, veiled in the twilight, and on the other the citadel gleamed bright in the golden rays of the setting sun, whilst before us spread the wide park, traversed by the noble deer which followed the melancholy "Come! come!" and fearlessly approached to receive the proffered dainty.

Gunther also came to Coburg. He is to me a dear familiar personage, whose single hearted attachment to my husband has about it something almost touching. With him appeared my husband's "dear friend" Vogel,* who visited us both on his way to Darmstadt and back, but whose visits were so flying that I scarcely got to know him. He is too staid and grave to make himself quickly at home, and I regrettingly saw him depart without having succeeded in picturing him exactly to myself. The community of feeling which subsists between him and my husband is, however, well known.

The same day which carried off Vogel brought Hopf, who was all fire and flame, not only on account of Kohler's process, but because of the Rhine voyage, which had also contributed to his excitement, although in quite a different manner. Verily this Rhine voyage must be charming, very, very charming.

Eight days after the departure of Hopf, we were enabled to greet Hruschka,† with which dear friend we had corresponded during a year before we learned to know him personally.

*Introducer of the Egyptian bee.
†Inventor of the centrifugal honey extracting machine.

Notwithstanding some difference of opinion, he has become heartily dear to us, and we often think of him with pleasure. With him our succession of company came to an end, for alas! alas! the visit of our dear editor, Schmid,* which was intended as a surprise to us, was frustrated by the death of his little daughter. Whilst yet attending the bee-masters' meeting, a telegram called him back only to find his child extended upon her bier. One daughter a bride, the other with wreaths lying upon her coffin—which may be the happier?

Having thus mentioned our visitors, and reported what occurred behind the scenes, I have still something on my mind. It seems to have been stated and believed at Darmstadt that my articles may be the productions of my husband. Now the idea is so ridiculous, that if it were not insulting, it might be extremely amusing. Poor lords of creation! Have you never found a woman, who without stepping out of her sphere, took an interest in something more than eggs, butter, and servants? Do you not know how to distinguish differences of thought and style? Can you not understand that my manner of writing is as impossible to my husband as his learned treatises bristling with quotations would be to me? Those who are not sensitive might not feel this, but at any rate a less hasty judgment is to be commended. I thank God that my dear husband's health is improving, and I trust the time will soon come, when by his sledge-hammer blows he will demonstrate *ad oculos*, that he has no especial *penchant* for my style of writing.

Whilst penning the foregoing our little dog was brought in. He had been run over by a stage coach. Four hours later he was dead. Many bee-friends will remember our pretty Sepp, which my husband had so long ago, as when he was in Gotha. He was only a dog, but his loss has caused us bitter pain. He who knows mankind learns to value dogs for their fidelity and unswerving affection. Let these words be Sepp's monument.—LINA, BARONESS VON BERLEPSCH, *Coburg*.

*Andreas Schmid, editor of the German Bee Journal.

[For the American Bee Journal.]

Gallup and the Langstroth Hive.

MR. EDITOR:—I see in the March number of the BEE JOURNAL, page 170, that my friend Gallup is out again in his usual braggadocio style. He starts off by telling us what he did "when a great, green boy," and then says "that disposition" has never left him. What disposition does he mean? I suppose the disposition to be cruel and "green." Well, let that be as it may, what has it to do with his former statement that the Langstroth hive was "rejected all over the west"—though he now states that he said so merely to see what effect it would have, and to "draw out Mr. Alley again." Well, if he had stopped there, it might have done well enough, for no one who has travelled through the west, and paid any attention at all to the subject, believed what he said about the Langstroth hive being "rejected all over the west." He says my fault-finding would have been just if he had written only one article for the BEE JOURNAL. Pray, Mr. Gallup, point us to the article you ever wrote that goes to prove that the statement is true that the Langstroth hive is "rejected all over the west." Your experience in beekeeping, Mr. Gallup, has nothing at all to do with that statement. Again, you say that you could take my side of the question and "beat me all hollow." Beat me at what, Mr. Gallup? I am not on the other side to be "beat." Suppose you attend to your side of the question first, before you offer your services on my side. Make your statement good, and then we will pass on and consider other parts. Why, Mr. Gallup, am I "barking up the wrong tree?" I aimed to "bark" up the tree at the "Osage" gentleman. Is that the wrong tree? It may be very small game, but nevertheless visible to the naked eye.

Now, Mr. Gallup, what does all you have said amount to? In answer to my objection to your former article concerning the Langstroth hive, (or shallow things, as you call them,) you say that they are "rejected all over the west." I say they are not. Can you prove your statement true? Again, you said that you knew a man to lose six hundred dollars worth of bees in one winter in the Langstroth hive; but failed to show that it was the fault of the hive. Is that a fair way to treat the subject? I knew a man to lose one hundred and twenty-five stands in one winter, and he never saw a Langstroth hive. Bees that "do not know any better," will die sometimes in almost any kind of hive. Suppose you are the "new beginner's friend," what has that to do with the subject under consideration? I suppose, judging from your own words, that you are the "new beginner's friend" merely to see "what effect it will have."

I thank you, Mr. Gallup, for your kind banter to "discuss the merits and demerits of the different forms of hives." I do not see what there is for us to "discuss" about, as we do not differ about the form of the hive. You say the form of hive that Mr. Langstroth uses is well adapted to the climate in which he lives; but that in your latitude you must have "two inches more in depth of comb." I say I do not know about that, as I never cultivated bees immediately in your climate. I own bees in northern Illinois, and they do well in the same form of hive as in eastern Indiana. So you see, Mr. Gallup, that there is barely two inches of ground between us, and that is hardly enough to make a fuss about. At all events, it would not be room enough for two *great men* like Mr. Gallup and myself to fight on. We should be very apt to get off the track and say something "to see what effect it would have." But, Mr. Gallup, since you have thrown out the banter, suppose you lead off and let me see what kind of hive you do prefer. If you do not "hit it too hard," I may venture to say something on the subject. Leave the old tom cat, and the desire to see what effect such cruel treatment will have, out of the ring this time, and deal in facts.

B. PUCKETT.

WINCHESTER, IND., March 22, 1869.

[For the American Bee Journal.]

Queens Mating Twice.

MR. EDITOR:—My unfortunate articles on this subject have called down so much criticism, both public and private, that I have been deterred from adverting to it again till this late day, for fear that I might be in error in regard to the position which I then assumed. But after having carefully considered the subject in all its bearings, and collated all the evidence in my power, on both sides of the question, I am more firmly than ever convinced that I was then right; and that queens do not mate but once—using the term *mate* in the sense of copulation resulting in impregnation.

Were this otherwise, what guarantee has any one of raising pure Italians in a section of country where the native bee exists, even though he use imported queens exclusively? For if queens will mate more than once, may not the imported lady so demean herself, as on some sunny day to leave her hive on an amatory excursion, in a locality where black drones only are to be met? This conclusion must legitimately follow, for if she will leave the hive once (or even more times, as some affirm) after impregnation has taken place, who of us can place a limit to her excursions, or define the time when she will not so do? Nor is the liability in the least degree lessened, even if imported queens are relied on; for, of course, the same rule applies to them as to their daughters.

When the question first came up, I foresaw what the result would be; and that perhaps many parties would be deterred from buying American bred queens, fearing that their purity might be impaired by successive marital flights. Of course such at first thought they would "go in" for imported queens, believing that these were not liable to the same rule; and this idea has been distinctly inculcated by parties directly interested in the selling of imported stocks, as probably all the readers of the "Journal," have long ago seen. I do not intend to impugn any one's motives, but the "Journal" is the medium of free expression of thought, and truth must prevail, no matter how much agitated or denied.

If any one looks at this matter in a physiological point of view, he will see at once the improbability, not to say impossibility of twice mating being true. The Allwise Creator has designed that among bees impregnation should take place high in the air, (this I believe is a conceded fact,) in order probably to guard as much as possible from in-and-in-breeding. Now, as the large size of the queen, and the smallness of her wings, make this a matter of great danger to her; and as the whole life of the hive depends upon her safety; is it all likely that the laws by which she is governed would allow her repeatedly to attempt a journey of so much danger, merely to gratify an amatory desire? No! I cannot allow any one to disparage the Almighty's evident laws, and to make a wanton of my favorites, without taking up the cudgel in their defence.

The introduction of the Italian bee has to my mind proved the fallacy of the idea which has called out this article; for if an introduced pure queen should mate the second time with the native drone, would we not at once know it? And, after careful inquiry, I have not been able to find a single case where an impregnated queen has ever voluntarily left her hive, except when she went forth legitimately with a swarm. When any one will *prove conclusively* that this has ever been the case, then I will admit an error on my part; but till then you will find me adopting the text quoted by Mr. J. DAVIS—"Prove all things; hold fast to that which is good." Excuse me, however, if I want them *proved*.

As this subject is to my mind one of importance, I hope it will be fully ventilated. But give us *facts* not *theories*, or else you must not expect me to endorse your views.

J. E. POND, JR.

FOXBORO, (MASS.) May, 1869.

[For the American Bee Journal.]

Sending Queens by Mail.

MR. EDITOR:—As I noticed, in the BEE JOURNAL for January, an illustration of a queen cage, for sending Italian queen bees by mail, I will send you a cage in a few days which you may, if you see fit, illustrate in the JOURNAL. I have been using and perfecting this cage for the past two seasons. It is 4½ inches long and 1¼ inches in diameter. Two pieces of wood are used for the ends, which contain the sponges saturated with honey. Turn the wood (soft pine) in a lathe 1⅛ inches in diameter, and any length convenient; saw it into pieces 1¼ inches long, boring in each end before sawing off a hole ⅞ inch in diameter and ¾ inch deep for the sponges, which are held in place by a common brass pin near each end.

Iron wire netting, containing about fifteen meshes to the inch, is cut 3½ inches by 4½ inches, to cover the whole, and is fastened with three tacks at each end. One end is to be fastened first; then the queen and twelve or fifteen workers are placed therein, closed up, and a half sheet of note paper is wrapped around and fastened with common thread for the P. O. address. Cut two or three slits in the paper to give the bees air, put on a two cent. stamp*, and they go safe as seed bees ninety-nine times out of a hundred the distance I send them, which is from one hundred to five hundred miles. When away introducing queens, I have

*It will be seen, by the following letter from the First Assistant Postmaster General, that a THREE CENT, postage stamp must be affixed to these queen cages, when not weighing more than half an ounce, in order to prepay the postage:

POST OFFICE DEPARTMENT, APPOINTMENT OFFICE,
WASHINGTON, December 28, 1868.

SIR:—In reply to your letter of the 23d instant, I have to say that under no circumstances can bees put up in cages or boxes be permitted to go in the mail at less than letter rates of postage, viz: three cents for each half ounce or fraction thereof.

I am, very respectfully, &c.,
JOHN B. S. SKINNER,
First Assistant Postmaster General.

carried them in these cages in my coat pocket for a week at a time, perfectly safe.

I will now give an illustration of the best device I ever found for holding newly transferred combs in place. Take 1-10 inch iron wire (stiff wire is best); bend it just wide enough to fit over the top bar of the frames in the Langstroth hive, having two prongs from six to eight inches long. By springing these to fit different thicknesses of comb, they will hold it firmly in place. As soon as the bees fasten the combs the wires can be withdrawn without disturbing them. Two wires in a frame is generally sufficient. No practical beekeeper will use anything else after once trying these.

I like the Italian bees very much for this section. The year 1867 yielded honey bountifully, but 1868 was below the average, and bad for queen raising. Like some other beekeepers, I believe in improving imported stock, and am constantly aiming at that one point.

W. O. SWEET.

WEST MANSFIELD, MASS.

[For the American Bee Journal.]

Puff Ball Smoke and Fertile Workers.

On page 40 of the September number of the BEE JOURNAL I see (what is claimed to be by the writer) an infallible cure for drone-breeding colonies. He states that he made known the process at the Convention of German beekeepers at Hanover in 1868; but that it does not seem to have attracted the attention it merits. He states that it is only necessary to stupify the colony with puff ball smoke, and at once introduce a fertile queen among the bees, before they revive; this done, the cure is effected.

Now I understand that in some of these drone-breeding colonies a queen is present which never mated with a drone, and that in all cases the queen may be selected from among the bees, and destroyed. Then we have a queenless colony to which we may introduce a fertile queen, after some of the usual modes, thereby effecting a cure without the use of puff-ball smoke, or any other stupifying agent. I further understand that we sometimes have a colony in which a fertile worker is present, and that in such a case we cannot select the fertile worker from among the other bees, as there are no distinguishing marks of difference as regards either shape or size. Such at least was the case with one in my own apiary. I made repeated search for the miscreant, but without success. I then introduced three fertile queens at different times; each was well received by the bees; but within twenty-four hours after their introduction, I found a dead queen in each instance, on the platform in front of the hive. But what I wish to ascertain is, how puff-ball smoke is to effect a cure in this kind of case. Are these fertile workers decidedly more tender than any other workers, and consequently more easy to smother to death from smoke? Or is the cause only accidental? That is, where the process of smoking is carried to the extent of killing a portion of the bees, does it not happen occasionally that the fertile worker is among the slain? Or, does the smoke destroy the egg-laying power of the fertile worker, and change her natural disposition of hatred towards a fertile queen into feelings of love or indifference? Let me understand upon what principle this agent operates, if it really has any such effects. If the cure is infallible it will of course cure the first described case, in which we have an unimpregnated queen which we can hunt out from among other bees, since we have certain marks of distinction in such a case. But if the cure is effected by means of suffocating the drone-breeding queen, then this kind of smoke is very dangerous to use, in cases where we have a fertile queen; as it will be very likely to suffocate her among the first bees that perish. But if it operates by means of changing the disposition of hatred (which the queens have for each other) into feelings of love or indifference, it may be quite a valuable smoke, as then we could subject our queens to a course of it, and keep as many in one hive as may be desirable. But should it effect their egg-laying qualities, as well as their disposition, then it would be a destructive agent, to be used with caution among fertile queens. Now this agent must operate in some of these different ways, or it has no such power as is claimed for it. Please let those state how or in what way it operates, who have tried it and know its *modus operandi*.

GODFREY BOHRER.

ALEXANDRIA, IND, Nov. 23, 1868.

[For the American Bee Journal.

Antidote for Bee Stings.

MR. EDITOR:—My bees seem to assert and maintain "belligerent rights," both offensive and defensive, whenever they judge their honor insulted; and I have been seriously assaulted by them on several occasions. Their sting is very poisonous to me, and to many other persons, causing frequently appalling inflammation. I suffered much from this cause last season, and tried various prescribed remedies, such as spirits of hartshorn, soft soap, salt and vinegar, saleratus-water, &c., without much benefit, and I had almost decided to dispose of my bees this spring, unless I could get along without so much suffering from stings.

I have now, however, found an effectual antidote. A few days ago I was stung on the right wrist. I removed the sting with the point of my penknife, and applied *a little kerosene oil*. The pain immediately subsided, and no inflammation appeared. Yesterday I was stung again, on the other wrist, and applied the same remedy, with the same happy results.

I think I may rejoicingly say that the discovery is made, that *kerosene oil* is an effectual *antidote for the poison of the bee-sting*. Let others try it, and report.

P. R. RUSSELL.

BOLTON, MASS., April 2, 1869.

[For the American Bee Journal.]

About Patent Rights and Claims.

MR. EDITOR:—I see that the BEE JOURNAL is open for free discussion, and that those who are interested in bee-culture make many inquiries and are answered through its valuable columns. That is what makes the Journal so interesting; for we get the ideas of different bee-keepers in all parts of the United States. Now will some of the readers of the JOURNAL give us information in regard to patent bee hives? The hive I prefer using, in common with nearly all the bee-keepers in this section, is Peter J. Severson's Double Surplus Frame Hive, which he claims he obtained Letters Patent dated February 25, 1868. I will give a brief description of this hive. It is 12 by 12 inches inside and 16 inches high. The frames are 10½ by 14 inches. The top arrangement consists of a box the same size as the hive, and 6 inches deep, with neither top nor bottom. This box contains five frames 5½ inches deep, 1¾ inches wide, with perforated partitions between each frame. The honey-board is then removed, and the surplus box placed on the top of the hive; the frames being ⅜ of an inch above those in the hive. Thus, you see, we have the same degree of heat in the surplus apartment as we have in the hive; which we all know is very essential for bees to build comb.

On page 151, February number of the BEE JOURNAL, I find that Mr. Langstroth claims to be the inventor of all movable frames for bee hives. He also says that there are at least forty different patents of bee hives, and nearly all of them using frames which are an infringement on his rights. Now, I have no reason to dispute Mr. Langstroth's word; but will he please to inform us why he has allowed different parties to construct bee hives and get them patented, all using the frames which he claims are his property?

Now the question is, first, does the Patent Office grant patents to different parties upon one invention, without the consent or license of the inventor?

Second. Of whom shall we buy the right? Langstroth claims to be the inventor of all movable frames. Severson claims that he invented his hive, and that his patent is as good as any that has ever been granted by the Patent Office.

Let us hear from Mr. Langstroth, Mr. Gallup, Mr. Quinby, or anyone else; for my mode of doing business is, first to know that I am right, then go ahead.

Bees have done well the past season, and were put in winter quarters with their hives nearly full of honey. They have wintered well, as far as heard from; excepting in one apiary, and that belongs to one of our neighbors. He partitioned off a part of his wagon house, and lined it with straw, with no ventilation, above or below. He put his hives in this coop, in as good condition as any I ever saw; and the result was that this spring, out of fifty-three colonies, he had twenty-two left. All that died had the dysentery. Was this caused by not having proper ventilation?

B. C. AUCHAMPAUGH.

WEST TOWNSHIP, N. Y.

[For the American Bee Journal.]

To Introduce Italian Queen Bees.

Although I am an old queen bee breeder and queen bee introducer, I lost a queen once in a while—though following the instructions of Mr. Langstroth. Last season, when I had so many to introduce, I concluded to try Mr. Thomas' way, to tie an old cotton rag over the opening of the cage, and leave it to the bees to perforate it and liberate the queen. Of about one hundred, every queen so introduced, late in the season, when bees are not usually very willing to receive a stranger queen, was liberated and received by the bees without difficulty. I therefore feel myself under great obligations to Mr. Thomas, and would recommend to every beekeeper this mode of introducing queens.

DISPOSITION OF BLACK BEES TO BECOME DRONE BREEDERS, IN NUCLEUS HIVES.

When I first commenced raising Italian queens, I was compelled to use black bees. At that time I did not know the difference between them and Italian bees, as far as workers becoming drone-layers is concerned. In almost every nucleus some workers commenced laying before the young queen hatched, at which time they would stop laying; but when I took away the queen after she became fertile, these drone layers would begin their work again. Then, in most cases, the workers would not build new queen cells, and if any such cells were furnished from other stocks, they would be sure to be destroyed, unless very nearly ready to hatch.

Two years ago I had a fair chance to ascertain that black bees or poor hybrids are a great deal more apt to turn drone-layers than Italian bees. A neighbor of mine asked me to raise some queens. I promised to do so, provided he would furnish the nucleus hives with bees, from his apiary. He brought a lot of black bees, which we put into two nucleus hives, and I succeeded in raising a queen in each of them, although some drone-laying workers had already made their appearance. But neither of these nucleus hives built a queen cell from the brood left by the fertile queens when taken away. A number of queen cells inserted were successively destroyed, and the bees went on breeding drones uninterruptedly for nearly six weeks, when I concluded to kill the few remaining. At the same time I had more than sixty nuclei, stocked with Italian bees, of which, though treated exactly like the others, not one became drone-breeding.

A. GRIMM.

JEFFERSON, WIS.

THE AMERICAN BEE JOURNAL.

WASHINGTON, JUNE, 1860.

☞ The American Bee Journal is now published monthly, in the City of Washington, (D. C.,) at $2 per annum in advance. All communications should be addressed to the Editor, at that place.

☞ The present is the concluding number of the fourth volume of the Bee Journal. We find, on examination, that a portion of our subscribers are in arrears for this and the preceding volume. As we have to pay cash for material and work, our terms are necessarily payment *in advance;* and we are continually receiving assurances from intelligent practical bee-keepers in all parts of the country, that the Journal is well worth its price. The support which it has thus far received, including *promises*, will not, however, do more than cover cost, as the expenses of publication here are very heavy. Will not our friends join us in the effort to increase our subscription list to a remunerating point; and those who have hitherto failed to contribute the "material aid" due from them *and much needed*, supply the omission promptly, that we may commence the ensuing volume with the conviction that the work will be permanently sustained?

☞ Our next issue will contain a translation of the communication on foulbrood, received from Mr. Lambrecht, of Bornum, in Prussia; which may be regarded as introductory to a further discussion, and, we trust, final disposal of that subject by him. His investigation of the nature, source, cause and cure of this destructive and hitherto unmanageable malady, has been steadily prosecuted and carried on with such satisfactory results, that he has engaged to submit his present process, (which differs somewhat from that formerly employed) to a test experiment under the supervision of a committee appointed by the Brunswick-Salzgitter Beekeepers' Union. His proposition is, to render foulbroody a healthy colony of bees selected by the committee; and after the existence of the disease in its worst form, in such colony, has been demonstrated, to effect a perfect cure in the course of two days at most. He will not make known his process until after the committee report the issue of this trial.

☞ The late Convention of German Beekeepers at Darmstadt, resolved to hold a jubilee at their next meeting in Nuremberg, in September next, in honor of Mr. Andrew Schmid, Seminary-prefect at Eichstädt, in Bavaria, and Editor of the *Bienenzeitung*, which paper has just entered on its twenty-fifth year under the editorial management of Mr. Schmid. It is proposed to use the occasion to provide and present to Mr. S. a "free will gift" of money and other valuables, by contributions from German beekeepers; who are also solicited to accompany their offerings with their photographs and autographs respectively, for an album dedicated to the honored object of this demonstration. A committee has been named in furtherance of these measures, and consists of the Baroness von Berlepsch, Messrs. Dathe, Dzierson, Gravenhorst, Hofman, Hopf, Von Hruschka, Rev. Mr. Kleine, Prof. Leuckhardt, and Dr. Ziwansky. Mr. Hugh A. Hopf, banker, of Gotha, has been appointed treasurer of the fund. American beekeepers will be invited to participate in the movement designed to secure to Mr. Schmid a gratifying testimonial of the appreciation of his services entertained by those engaged in bee-culture. For a quarter of a century Mr. S. labored with untiring industry and unflagging zeal to advance practical and scientific bee-culture; and his efforts have been eminently successful. It is known, however, that during a large part of the time his paper was sustained mainly by the editor's pecuniary sacrifices and gratuitous services; and it is believed that the former were never reimbursed, nor the latter adequately compensated, from the profits of the publication. It is therefore fitting that those who have been so largely benefitted by his labors should join to do him honor, by giving him tangible evidence of their just estimate of the ability and success with which he discharged his functions as editor.

A swarm consists not of all young bees, as many falsely imagine; but of a queen, of drones, and of working bees, both old and young—such as happen to be at the doorway when a swarm rises, and catch the emigration impulse.

Michigan Beekeepers' Convention.

The following additional items of the proceedings of this Convention were received from the Secretary, Mr. A. J. Cook, of the Agricultural College at Lansing, after the first six pages of our present number were stereotyped, and it was consequently impracticable to insert them in regular course. They form the concluding portion of the proceedings:

The President said that all wide-awake beekeepers would have none but movable frames.

Dr. Conklin. My hive has about two thousand cubic inches. The frame is square, and a corner is at the top.

Mr. Balch preferred low hives, so that he might get much surface for surplus honey boxes. He thought frames should not be more than 9½ inches deep.

Mr. Moon wished for deep hives, as they were warmer. Bees were more sure to winter well in them, especially on out-door stands.

The President thought Mr. Langstroth deserves great credit for bringing movable frames into use. These frames could be made deeper. He would have them 12 inches in depth.

Mr. Otis said Mr. Langstroth does not patent any shape of frame. Frames could be made of any shape. He said 8½ inches in depth was all sufficient. If wintered in-doors, 7 inches was deep enough for the frames.

There were three kinds of hives exhibited. One by Mr. Haywood, of earthenware in lieu of wood, He thinks it is cooler in summer, and warmer in winter.

It was moved and carried that the Secretary send a copy of the proceedings to the AMERICAN BEE JOURNAL for publication.

[For the American Bee Journal.]

Loss of Bees.

MR. EDITOR:—That bee disease which I read about in your paper, exists here to an alarming extent. If I had not given my bees plenty of sugar syrup, every colony would have been dead long ago. I wintered one hundred and thirty-two colonies in a cellar, and only five died with that disease, and that was from want of food.

Nine-tenths of all the bees in the northern part of this State are dead. Italian bees have no more honey than the black. One of my neighbors lost one hundred colonies out of two hundred Italians, with that bee disease. I am inclined to think bees have not had proper attention. It is well known that there was a scarcity of honey last year, and I suspect that was the cause of the bee disease.

I use the Langstroth hive, and can feed all my bees in one hour. Fruit trees are now in full bloom here, but there is no honey in the blossoms. Most people say if bees cannot now live, they may die.

S. W.

BATAVIA, ILLS.

[For the American Bee Journal.]

Birds and Bees in Louisiana.

We have a bird here, in Louisiana, that is a bee eater, and has destroyed its hundreds of bees. It is said to be a variety of ortolan. The female is about the size of the bee-martin; plumage dirty yellow. The male is about the same size, and its color red.

The operation is thus: Early in the morning they will be found flying around the hives, and if no bees are on the wing, they alight before the hive and tap at the entrance, giving a succession of blows with the bill. Of course bees soon appear to reconnoitre, one of which is snatched up and carried to a limb of a tree, where it is rolled about between the ends of the beak of the bird, with a snapping sound, such as a "cardinal" makes when eating corn, and then swallowed. One bird swallowed thirty (30) bees in less than ten (10) minutes. They are very expert at catching bees *on the wing*. So troublesome were some of these birds, that I made a sort of barricade with laths around my hives, to prevent them from getting near the entrance.

Orange flowers were very abundant, and gave a good supply of honey. White clover is now abundant. Swarms came out on the 6th of March, and from that date until April 10th. The season is now probably over. The swarms were very large; and having been so much annoyed by the birds, were unusually cross.

More swarms were noticed this year than ever before.

We have no Italians here. My friend Dr. A. W. Smyth, Surgeon of Charity Hospital, New Orleans, has several colonies, and is much pleased with them; though one of the colonies is far more difficult to handle than the ordinary bees—a hybrid, probably, though well marked. Will give you an occasional note from here, if of any interest.

GEORGE HOWE, M. D.

POINT A LA HACHE, LA.

[For the American Bee Journal.]

Getting Bees out of Honey Boxes.

In the BEE JOURNAL, volume 4, page 219, Mr. J. T. Rice gives his method of getting bees out of honey boxes, and says if any one has a cheaper, quicker, or easier way, that is not patented, he would like to know it. I will give him my way, which is more *sure*. I have tried his method often, and failed to get all the bees out.

I take off the boxes late in the evening, and set them in any dark room, on a shelf or long bench, in such a manner that the bees can get out of the boxes and crawl from one to another. I then cage a queen and place her in an empty box about the centre of the row or pile of honey boxes, and every bee will collect around her. Next morning the queen may be taken back to her hive, and the bees set at liberty near the

apiary, when all will return to their respective homes. Or they may be put in a hive or nucleus with the queen, and form an independent colony.

This method is *not patented*. Try it, Mr. Rice, and report your success.

I made the discovery by accident, in 1862. While taking off a large lot of boxes, a queen happened to be in one; the next morning all the bees had collected around her. Since then, I have tried it often, and have never failed to get *all* the bees out.

H. NESBIT.

CYNTHIANA, KY., May, 1869.

[For the American Bee Journal.]

Barren Queens.

THE CAUSE OF THAT DISEASE.

MR. EDITOR:—In the last JOURNAL I find some remarks on the above subject, by friend Thomas, of Brooklin, Canada. I think the correctness of his remarks depends much upon how he defines the word *barren*, when applied to the condition of the queen. If he means that she has ceased to lay worker eggs, but still continues to lay drone eggs, then I think the *barrenness* which he regards as a contingency "too common to be productive of such fatal results," will, every time it occurs, prove fatal to the stock in which there is just such a queen, unless promptly supplied with a fertile one. If he means that the queen has, for a longer or shorter period, ceased to lay eggs of any kind, then, if this period of time is too long protracted, it would again prove fatal to the colony, as it did in 1868, no matter how *common* the *contingency*, for a short period of time. If then the failure of honey in the flowers will be the cause of barreness in the queen, as long as it continues; our remedy is to feed the bees and stimulate the queen to fertility. This failure of fertility with the queen is no longer problematical with me, as to its "fatal results." It is now fully developed in those stocks that died—a pint or a quart of dead bees being all that is left of a once fertile queen.

The scarcity of honey began, in 1868, about the middle of July, and continued until in September—long enough to make most of the queens barren for six months. Well might we look for the death of thousands of swarms, which have passed out of existence from such common contingencies. That "scarcity of honey" will instinctively cause the bees to cease to stimulate the queen to fertility, is now placed beyond a doubt. This, then, is a legitimate reason for the loss of so many bees all over a wide extended tract of country, without taking into account anything that has been said about poisonous honey, want of pollen, constipation, or cholera, as the cause of their death.

Shall we let this occur again, without an effort to save our bees, by feeding them in the time of scarcity, to keep the queen breeding, and thus keep the stock strong; or, by increasing the amount of *pasturage*, to gain the same end? We must increase the amount of pasturage, to be successful and prosperous in bee-keeping.

JEWELL DAVIS.

CHARLESTON, ILLS., May 7, 1869.

[For the American Bee Journal.]

The Dzierzon Theory.

REPLY TO H. ROSENSTIEL.

In the May number of the current volume of the BEE JOURNAL, page 222, H. R. refers to my article on page 90 of the BEE JOURNAL, for November, 1867, and says that I claim that the Dzierzon theory is not true. I am surprised that he should make such a mistake, for, by reference to that article, it will be found that I say as follows:—"Now, while I fully endorse the conclusion arrived at by Mr. Lowe, 'that drones are in some way affected by the act of fecundation,' yet I *cannot* say with him that the Dzierzon theory is not the true theory of reproduction of the honey bee."

H. R. will understand that Dzierzon claimed that a pure queen, mating with a common drone, would produce drones as pure as herself. This at least is what I understand Dzierzon to claim; and I hold that it is quite correct. Nevertheless, the drones are not pure. And why? Simply because the queen is affected by the act of coition with the black drone. By absorption and circulation her whole system partakes of the nature of the male, and she is no longer as pure as she was before coition. Hence her drones, though as pure as herself, are not pure; yet they are not hybrid, and the Dzierzon theory is true that drone eggs are unimpregnated eggs.

If H. R. doubts my theory, he will, of course, accept my offer on page 165 of the BEE JOURNAL, for March, 1869. Some may suppose that the above theory would make the honey bee an anomaly in creation; but such is not the case, for it will be found true in very many other animals. It is well known to sheep-breeders, that the blood of the male that first cohabits with the ewe, will appear in after generations, though the ewe may never again cohabit with a male of the same blood. This is true also of cattle, horses, fowls, and even of human beings. Is it strange then that it should be the case with the honey bee?

I would say to H. R. that it is no evidence that the black drones did not partake of the nature of the Italians because to the eye they "bore no Italian marks." It is often the case with fowls, and other animals, that no foreign or impure blood can be discerned in the male, yet it will appear in the next generation. I would say, therefore, that though the drones produced by a pure queen mating with a black drone, may not show to the eye any signs of black blood, yet if such drones mate with pure queens, the progeny will show the dash of black blood, by losing one or more of the yellow bands. Hence my offer, already referred to.

J. H. THOMAS.

BROOKLIN, ONTARIO.

[For the American Bee Journal.]

Purity of Italian Queens.

My friend Ch. Dadant misapprehends me somewhat.

I do not rely *on color* simply, as a test of purity. But this I do say, that every perfectly pure (if I may be allowed the expression) Italian worker has three yellow bands. In other words, a *pure* queen impregnated by a pure drone, will produce a progeny of bees every one of which will have three yellow bands; but the bands may be lighter or darker in color. In some instances the color will be almost orange, in others a light yellow. It is not the *color* that is affected by a dash of black blood, but the *number of the bands*; for a hybrid stock will often contain workers of a light yellow color.

Friend Dadant thinks that if a "three-fourth Italian drone" should mate with a pure Italian queen, I would hardly be able to detect the change, if I rely only on color. Now, as it is not on color, but on the number of bands I rely, it will be seen that the change would be easily observed; for the slightest dash of black blood will cause some of the bees to lose a band, and some two bands. Now, it is held that if a *pure* queen mates with a black drone, her worker progeny will be hybrid; but her drones will be pure as herself. This theory is correct, yet the drones are not pure; though they are as pure as the queens that produced them. Paradoxical as this seems, it is easily explained. The absolute purity of the queen ceases at the moment of coition with the black drone. She is no longer pure—her whole system has been impregnated, so to speak, with black blood in the act of coition, and as the eggs which produce the drones are particles of herself collected together, so the drones produced by those eggs have, like herself, a dash of black blood; and in every case when such a drone meets with a pure queen, the progeny, although not hybrid, will show the dash of black blood by losing one or more bands. Yet every bee will be marked; and none entirely black, as in hybrid stocks.

If, therefore, such a slight dash of black blood causes the loss of a band, the impurity would be easily discovered in such a case as supposed by friend Dadant, as the dash of black blood would be greater and more direct.

The above theory is as true in reference to many other animals, as with the bee, which can be clearly shown if necessary.

J. H. Thomas.

Brooklin, Ontario.

[For the American Bee Journal.]

That "Economic Hive."

Mr. Editor:—I wish to give my testimony in favor of the hive called as above by Rev. J. W. Truesdell, and explained by him in the May number of the Bee Journal. I hit upon the same plan several months ago, partly by reading Mr. Gallup's and Mr. Price's articles, and partly because my frames were 12 by 14 inches inside measurement, which I became satisfied were too high for profit and convenience in handling. Concluding to make the frames 11 inches high, I made up the loss in depth by making my hives wide enough to hold twelve frames and a partition board.

I cut down the frames and hives of sixteen stands of bees, part of them the middle of April, and the remainder a few days ago. I made my caps twelve inches high, and large enough to shut out the main hive, which makes a very simple and inexpensive double hive. The nucleus apartment seems to be the best yet devised for raising queens. Each hive can be made with a small entrance in one end, and be used for a nucleus at any time, to put in all spare queen cells, by adjusting the partition board.

My Italian bees have plenty of honey, are in fine condition, and are putting out brood very rapidly. I wintered them in double hives on their summer stands. Have used double hives for three years, and have never lost a swarm in them. I lost a swarm the last March in the only single hive I had, in this manner: They had lost but little honey, and I was feeding them. One sunny day after a very cold one, I opened them in the morning and found them apparently dead. They appeared to be as lifeless as any dead bees I ever saw. I brushed them off the bottom board in a pile on the ground. Passing near them in the afternoon, to my astonishment, I found them alive, queen and all. I gathered them up, and if the next day had been warm enough for bees to fly, think I could have saved them. But as they had not not discharged their fæces, and the weather continued cold for a week or more, I could not save them.

Just after a few days of cold weather along the first of March, in examining a stock containing a pure Italian queen, I found a handful or two of dead bees between the second and third outside frames. As it was quite cold, I did not look to see if their queen was safe. The next two weeks was very cold weather. The first warm day, which was four or five weeks after, I opened the hive and found a small dark-colored queen and the cell she was reared in. As she has not laid any eggs since, and as there was brood the first of March, she must have been reared when the weather was at zero.

I have received much useful information from the Bee Journal, and advise all bee-keepers to subscribe for it.

J. L. Peabody.

Virden, Ills.

[For the American Bee Journal.]

Crooked Combs.

Is there any way to secure straight combs? If so, I should like to know how. Will Mr. Quinby, or some other beekeeper of experience, please give me his plan? I am using the frame hive, but my bees make the combs crooked. I have one hive with five frames wove together so that they cannot be separated. Is any one else having the same trouble?

Charles Taylor.

Bordentown, N. J., May 6, 1869.